DRAWINGS:

The attached sheet of drawings includes amendments to Figs. 1 and 2 and replaces the original sheet of drawings with Figs. 1 and 2. As required by the examiner, the sectioning of element 14 has been changed to indicate an insulating material as a synthetic resin or plastic and the reference number "16" has been added to Fig. 2 with the lead line directed to the flex cable end portion which includes the dielectric and conductive trace signal/reference assembly.

REMARKS:

The examiner has rejected claims 1 through 8 and 10 through 15 under 35 U.S.C. 103(a) as being unpatentable over Booty (US 4,875,871) in view of Gomez (US 6,126,453) wherein it is stated that Booty shows a connector for connecting an electrical apparatus to a high frequency electrical connector. Although Booty in Fig. 12 shows a carrier for a modular electrical conductor system that includes outboard channels or "isolated chambers or passageways" that enclose twisted conductor pairs, the disclosed apparatus would not be effective to connect to a current state of the art high frequency connector. The apparatus as taught by the present invention, using a flex strip with conductor traces carried thereon, permits the conductor to be impedance matched to high frequency signals having a frequency of 100 megahertz or greater and not uncommonly 1 gigahertz. This is achieved by the dimensions of the flex strip and conductive traces and the thickness and material used for the flex strip which extends as a continuous strip from one connector end to the other connector end.

Gomez shows a flat strip transmission line wherein conductors are mounted on an expanded foam dielectric layer which creates substantial rigidity, a property that is utilized in the application disclosed. Gomez further teaches the use of spring loaded contacts (such as element 122 in Fig.7 and 222 in Fig. 9) to assure contact between adjoining links (transmission line segments). A flex cable is typically a flexible dielectric strip or film with conductive traces that accommodates frequent flexing in use such as a flex cable that connects the moving actuator of a magnetic disk drive to the stationary circuitry of the device. The Gomez teaching would not show or suggest the use of a continuous flexible strip dielectric signal carrying element between connector ends as disclosed and now claimed in the present application. The Demus et al reference (US 5,244,410), which is added to the Booty and Gomez combination of references to reject

claim 9 under 35 U.S.C. 103(a), shows a flat cable with a particular termination structure, but does not teach the use of a flat flexible cable conductor application in the environment of a connector as shown and described in the present invention.

Independent claim 1, as amended, recites the use of a connector having a conductor body with a passageway therethrough in which is disposed a continuous signal carrying element as a strip of flex dielectric with first and second conductive traces with the dielectric maintaining a constant separation of the conductive traces from the first end of the connector body to the second end of the connector body. This structure allows a reference or ground trace to be positioned in close proximity to the signal trace to afford maximum protection against cross-talk with any adjacent signal traces as well as permitting the selection of dielectric material and dimensions of the signal carrying assembly elements to enable impedance matching with a connecting high frequency signal line.

Independent claim 10, as amended, recites a similar structure, but one in which the connector body includes multiple passages between the connector body first end and the connector body second end, each with a flex strip signal carrying element extending continuously from the first connector body end to the second connector body end. Also the close proximity of the signal trace and reference trace on the flex strip protects against cross-talk between signal traces. With multiple signals carried by individual flex strip assemblies in respective connector body passages, it is also possible to individually select dielectric materials and dimensions to individually match the respective signal carrying element to the high frequency signal to which it is connected. If a single flex cable were used to connect signals with varying impedance characteristics it would not be possible to use the optimal dielectric material for each signal or use the most economical material for the individual signal line. For example, the use of separate signal carrying

elements would allow the use of "low-k dielectric" for some of the signal elements, but not for others.

Claim 3 which was rejected under 35 U.S.C. 112 has been canceled by this amendment.

It is believed that the independent claims 1 and 10, as presented in amended form, are allowable over the prior art. The remaining claims that depend therefrom are allowable for the same reasons and differ from the parent claims only by the inclusion of additional limiting recitations.

The prior art cited, but not applied has been reviewed, but is not believed to present any art more pertinent than that included in the references that the examiner has applied.

It is believed that the application, as now presented in amended form, is in condition for allowance. Reconsideration and allowance are solicited.

Respectfully submitted,

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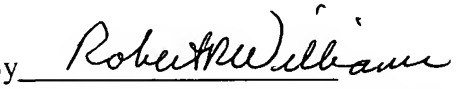
By 

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